

CLAIMS

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What is claimed is:

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- 1 1. A connector comprising:
  - 2 a hollow member having an open first end and an open second end joined
  - 3 by a bore extending through said hollow member having a first bore section and
  - 4 a second bore section that is stepwise reduced from said first bore section creating
  - 5 an annular shoulder therebetween, said first bore section tapering inwardly from
  - 6 said shoulder toward a third bore section;
  - 7 a sealing member receiver integrally formed into the connector and
  - 8 located within said second bore section near said third bore section; and
  - 9 a sealing member seated within said sealing member receiver and at least
  - 10 partially protruding inwardly into said second bore section.
- 1 2. The connector of claim 1 further comprising at least one retaining assembly
- 2 located on one end of said hollow member.
- 1 3. The connector of claim 2, wherein said retaining assembly is a barbed-type
- 2 retaining assembly formed on said hollow member adjacent said second end of
- 3 said bore.
- 1 4. The connector of claim 3 further comprising a sealing member receiver formed
- 2 on said barbed retainer; and
- 3 a second sealing member seated within said sealing member receiver on
- 4 said barbed retainer, said second sealing member extending at least partially
- 5 radially outward of said barbed retainer to effect a sealing relationship with a
- 6 conduit.
- 1 5. The connector of claim 4, wherein at least a portion of said barbed retainer is
- 2 formed without a parting line.

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- 1 6. The connector of claim 2, wherein said retaining assembly is a latch-type  
2 assembly including a retaining clip biased toward a lock position.
- 1 7. The connector of claim 1, wherein said hollow member is configured as an in-line  
2 connection with said first open end and said second open end lying on a common  
3 axis.
- 1 8. The connector of claim 1, wherein said hollow member has an elbow  
2 configuration with a bend between said first open end and said second open end.
- 1 9. The connector of claim 7 further comprising a flange extending partially into said  
2 bore extending between a first corner of said bend to a second corner of said  
3 bend, whereby said flange prevents over insertion of conduit.
- 1 10. A connector comprising:  
2 a hollow member having a first open end and a second open end joined  
3 by a bore;  
4 said hollow member defining a sealing member receiver housing an  
5 integrally assembled sealing member, wherein said sealing member receiver is  
6 adapted to load said sealing member such that a portion of said sealing member  
7 protrudes into said bore; and  
8 at least one conduit retaining assembly located at one of said ends.
- 1 11. The connector of claim 9, wherein said receiver includes a concave recess formed  
2 in said member having opposing surfaces between which said sealing member is  
3 seated.
- 1 12. The connector of claim 9, wherein said bore opens radially outward adjacent one  
2 side of said sealing member defining a clearance for removal of an insert  
3 assembly during formation of said connector.

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- 1 13. The connector of claim 11, wherein said hollow member has a surface adjacent  
2 said sealing member extending axially toward said first open end and radially  
3 outward to define a frustoconical bore section adjacent said sealing member.
- 1 14. The connector of claim 12 further comprising a cylindrical bore section adjacent  
2 said frustoconical bore section stepped radially outward by a shoulder separating  
3 said sections, said cylindrical bore section opening at said first open end.
- 1 15. The connector of claim 13 further comprising generally cylindrical third bore  
2 section stepped radially inward by an annular flange inward from said  
3 frustoconical portion to an extent less than the protrusion of said sealing member  
4 into said bore.
- 1 16. The connector of claim 14 further comprising a barbed conduit retaining assembly  
2 having a plurality of barbs formed on said hollow member assembly adjacent said  
3 second end;  
4 said barbed retaining assembly defining a second sealing member receiver  
5 located on an exterior of said hollow member adjacent one of said barbs;  
6 a sealing member carried by said second sealing member retainer;  
7 wherein said second sealing member is adapted to protrude radially  
8 outward of said barbs.
- 1 17. A method of manufacturing a connector comprising:  
2 providing a mold that defines a cavity, providing an insert assembly  
3 located within said cavity, and providing a sealing member within said mold  
4 contacting said insert assembly and partially exposed to said cavity;  
5 compressing said sealing member such that the contact between said insert  
6 assembly and sealing member is maintained as the connector is molded; and  
7 providing molten plastic material into said mold cavity to form the

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8 connector.

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1 18. The method of claim 17, wherein compressing said sealing member includes  
2 mounting said sealing member on a pin assembly slidably received by said insert  
3 assembly, and driving said pin assembly toward said insert assembly such that  
4 said sealing member is compressed between a portion of said pin assembly and  
5 said insert assembly.

1 19. The method of claim 18, further comprising the step of biasing said pin assembly  
2 is biased away from said insert assembly, overcoming said bias to compress said  
3 sealing member;

4 releasing said pin assembly after the connector is formed such that said  
5 pin assembly moves away from said insert assembly; and

6 subsequent to said pin assembly moving away from said insert assembly  
7 ejecting the connector from said mold.

1 20. The method of claim 17, wherein said mold includes a first mold portion, a  
2 second mold portion, and a third mold portion having a mandrel extending  
3 therefrom into the mold cavity;

4 inserting said mandrel as the mold is closed to compress said sealing  
5 member by bearing on said pin assembly;

6 opening the mold after forming the connector by retracting the mandrel,  
7 then opening said first and second mold portions, and pushing the connector off  
8 the insert assembly.

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